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EXAMINER
SAMUEL, DEWANDA A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/770,880	SREEMANTHULA ET AL.
Office Action Summary	Examiner	Art Unit	
	DeWanda Samuel	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date *02/03/2004 and 08/11/2005*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   **Claim 16** is objected to because of the following informalities:

The language of the claim is non standard and awkward and narrative.

The claim is not written to recite positive and active steps. For example, the

boundary between the preamble and the body is not clearly defined. See C 1.75

and MPEP 608.01 (i)-(p). Appropriate correction is required.

Claims 15 and 30 are objected to because of the following informalities:

the acronym "AN" needs to be clarified. Appropriate corrections is required.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   **Claims 1, 4,5,6, and 7** are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

With regard to claims 1, 4,5,6, and 7 the language is not clear as to

which device is performing this method.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

5.   The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at
        issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

6.   **Claims 1-4,16-19,27,11-14,26,28,29,40,41,15,30,31,32, and 39** rejected

under 35 U.S.C. 103(a) as being unpatentable over Thubert et al. (PG PUB

2004/0057440) in view of Janneteau et al. (EP 1376973 A1) and applicant

Sreemanthula et al.(PG PUB 2004/0169220).

With regard to claim 1, Thubert et al. discloses having a *method to*

manage addresses in a network, comprising: connecting a gateway mobile

terminal of a mobile network (MONET) to an access point (AP) of an access

*network (AN) that includes an Access Router (AR);*Thubert et al. discloses

having a gateway 12 (gateway mobile terminal) of a MANET 10 (mobile ad hoc

network) connected to the Internet ("access network") that includes access router 26 in fig. 1. However Thubert et al. does not discloses having an access point access point (AP) of an access network (AN) . The applicant Sreeemanthula et al. discloses in prior art in fig 1. having a access points 6A and 6B in an access network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the Internet ("access network") as taught by Thubert et al. with a access points 6A and 6B as taught by Sreeemanthula et al. to provide a point of entry to the access network.

Thubert et al. does not explicitly discloses *making a request to obtain a plurality of link addresses from a link address manager; allocating individual ones of the plurality of link addresses to individual ones of network nodes of the MONET;* Janneteau et al. discloses having a care-of route solicitation message 2400 in fig 24 soliciting for the all the nodes address("link layer addresses") from the CN ('link address manger" column 15 paragraph 82 line 1-58).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to gateway 12 as taught by Thubert et al. sending out a care-of route solicitation message all the nodes address ("link layer addresses") from the CN as taught by Janneteau et al. to provide a mechanism that will allow mobile nodes to communicate with other nodes after changing its link-layer point of attachment from one IP subnet to another.

and performing a neighbor discovery procedure with the AR to send at least one neighbor advertisement to declare the allocated individual ones of the assigned plurality of link addresses. Thubert et al. discloses having a gateway 12 with a mobile Ipv6 discovery resource 43...the mobile Ipv6 discovery resource 43 is configured for outputting a Home Agent Discovery Request message to an any cast address identified for a subnet prefix. In particular, each mobile router 16 has a unique IP address , where part of the IP address includes a subnet prefix that identifies a subnet to which the mobile router 16 belongs to (i.e. the subnet for which the corresponding home agent 18 is a member).

With regard to claim 2, in combination Thubert et al. Janneteau et al. and Sreemanthula et al. teaches the method in claim 1. *where each network node sends a neighbor advertisement to the AR to declare the link address allocated to the network node.* Thubert et al. discloses a mobile node may communicate with other nodes (stationary or mobile) after moving to new link (column 1 paragraph 8 line 14-18). However, Thubert et al. does not disclose each network node sends a neighbor advertisement to the AR to declare the link address allocated to the network node. Janneteau et al. discloses having MNNs ("mobile network node, "network node") sending one or more extended Binding Update messages to their respective CNs("access router") ...the care-of-route is an ordered list of IP addresses that a CN will use to source route its packets to the MNN on the shortest path ("AR", column 12 line 8-16).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a mobile node as taught by Thubert et al. sending a Binding Update messages to their respective CNs with care-of-route which is an ordered list of IP addresses as taught by Janneteau et al. to provide a mechanism that will know the true location of the mobile node.

With regard to claim 3, in combination Thubert et al. Janneteau et al. and Sreeemanthula et al. teaches the method in claim 1. *where the gateway mobile terminal sends at least one neighbor advertisement to the AR to declare the link addresses allocated to a plurality of the network nodes.* Thubert et al. discloses having a gateway 12 with a mobile Ipv6 discovery resource 43...the mobile Ipv6 discovery resource 43 is configured for outputting a Home Agent Discovery Request message to a any cast address identified for a subnet prefix. In particular, each mobile router 16 has a unique IP address, where part of the IP address includes a subnet prefix that identifies a subnet to which the mobile router 16 belongs to (i.e. the subnet for which the corresponding home agent 18 is a member, page 3 column 1 line 1-10).

With regard to claim 4, in combination Thubert et al., Janneteau et al. and Sreeemanthula et al. teaches the method in claim 1. *where the request is made to obtain a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes.* Thubert et al. discloses having an arrangement in a gateway 12 for registering a mobile router of a mobile ad hoc

network to respective home agents (title). However, Thubert et al. does not

disclose having a request being made to obtain a set of link layer addresses

(LLAs) that are allocated to individual ones of the network nodes. Janneteau et

al. discloses having a care-of route solicitation message that is an ICMPv6 router

solicitation message which can be sent by a MNN (mobile network node)...this

message solicits all the IP multicast address (" link layer addresses") belonging

to the router.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have a gateway12   as taught by

Thubert et al. sending a care-of route solicitation message that is an ICMPv6

router solicitation message whereby soliciting all the IP multicast address (" link

layer addresses") belonging to the router as taught by Janneteau et al. to provide

a mechanism that will know the true location of the mobile node.

With regard to claim 16, Thubert et al. discloses having a *system to*

manage addresses in a network, comprising a mobile network (MONET) having

a gateway mobile terminal and at least one Mobile Network Node (MNN), said

MONET being connectable via the gateway mobile terminal to an access point

(AP) of an access network (AN) that comprises an Access Router (AR), Thubert

et al. discloses having a gateway 12 (gateway mobile terminal) of a MANET 10

(mobile ad hoc network) connected to the Internet ("access network") that

includes access router 26 in fig. 1. However Thubert et al. does not discloses

having an access point access point (AP) of an access network (AN) . The

applicant Sreeemanthula et al. discloses in prior art in fig 1. having a access

points 6A and 6B in an access network.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have the Internet ("access network") as

taught by Thubert et al. with a access points 6A and 6B as taught by

Sreeemanthula et al. to provide a point of entry to the access network.

Thubert et al. does not explicitly disclose *said system comprising data*

processors that operate in accordance with stored programs, further comprising:

a link layer address (LLA) manager for managing LLAs, where a data processor

of the gateway mobile terminal is responsive to the gateway mobile terminal

connecting to the AP to request from the LLA manager information relating to a

plurality of LLAs and to allocate individual ones of the plurality of LLAs to

individual ones of the MNNs, Janneteau et al. discloses having a care-of route

solicitation message 2400 in fig 24 soliciting for the all the nodes address("link

layer addresses") from the CN ('link address manger" column 15 paragraph 82

line 1-58).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 as taught by Thubert et al.

sending out a care-of route solicitation message all the nodes address ("link layer

addresses") from the CN as taught by Janneteau et al. to provide a mechanism

that will allow mobile nodes to communicate with other nodes after changing its

link-layer point of attachment from one IP subnet to another.

further comprising at least one data processor performing a neighbor discovery

procedure with the AR to send at least one neighbor advertisement to declare at

least one allocated LLA. Thubert et al. discloses having a gateway 12 with a

mobile Ipv6 discovery resource 43...the mobile Ipv6 discovery resource 43 is

configured for outputting a Home Agent Discovery Request message to an any

cast address identified for a subnet prefix. In particular, each mobile router 16

has a unique IP address , where part of the IP address includes a subnet prefix

that identifies a subnet to which the mobile router 16 belongs to (i.e. the subnet

for which the corresponding home agent 18 is a member).

With regard to claim 17, in combination Thubert et al., Janneteau et al.

and Sreeemanthula et al. teaches the system recited in claim 16. *where each*

MNN comprises the data processor that sends a neighbor advertisement to the

AR to declare a LLA allocated to that MNN. Thubert et al. discloses a mobile

node may communicate with other nodes (stationary or mobile) after moving to

new link (column 1 paragraph 8 line 14-18). However, Thubert et al. does not

disclose each network node sends a neighbor advertisement to the AR to declare

the link address allocated to the network node. Janneteau et al. discloses having

MNNs ("mobile network node, "network node") sending one or more extended

Binding Update messages to their respective CNs("access router") ...the care-of-

route is an ordered list of IP addresses that a CN will use to source route its

packets to the MNN on the shortest path ("AR", column 12 line 8-16).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a mobile node as taught by Thubert et al. sending a Binding Update messages to their respective CNs with care-of-route which is an ordered list of IP addresses as taught by Janneteau et al. to provide a mechanism that will know the true location of the mobile node.

With regard to claim 18, in combination Thubert et al. and teaches the system recited in claim 16. *where the gateway mobile terminal comprises the data processor that sends at least one neighbor advertisement to the AR to declare the LLAs allocated to a plurality of the MNNs.* Thubert et al. discloses a mobile node may communicate with other nodes (stationary or mobile) after moving to new link (column 1 paragraph 8 line 14-18). However, Thubert et al. does not disclose each network node sends a neighbor advertisement to the AR to declare the link address allocated to the network node. Janneteau et al. discloses having MNNs ("mobile network node, "network node") sending one or more extended Binding Update messages to their respective CNs("access router") ...the care-of-route is an ordered list of IP addresses that a CN will use to source route its packets to the MNN on the shortest path ("AR", column 12 line 8-16).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a mobile node as taught by Thubert et al. sending a Binding Update messages to their respective CNs with

care-of-route which is an ordered list of IP addresses as taught by Janneteau et al. to provide a mechanism that will know the true location of the mobile node.

With regard to claim 19, in combination Thubert et al. Janneteau et al. and Sreemanthula et al.teaches the system recited in claim 16. *where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are allocated to an individual one of the MNNs.* Thubert et al. discloses a mobile node may communicate with other nodes (stationary or mobile) after moving to new link (column 1 paragraph 8 line 14-18). However, Thubert et al. does not disclose each network node sends a neighbor advertisement to the AR to declare the link address allocated to the network node. Janneteau et al. discloses having MNNs ("mobile network node, "network node") sending one or more extended Binding Update messages to their respective CNs("access router") ...the care-of-route is an ordered list of IP addresses that a CN will use to source route its packets to the MNN on the shortest path ("AR", column 12 line 8-16).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a mobile node as taught by Thubert et al. sending a Binding Update messages to their respective CNs with care-of-route which is an ordered list of IP addresses as taught by Janneteau et al. to provide a mechanism that will know the true location of the mobile node.

With regard to claim 27, in combination Thubert et al. Janneteau et al. and Sreemanthula et al. teaches the system recited in claim 16. *where said gateway mobile terminal comprises a wireless device.* Thubert et al. discloses having a gateway 12 ("gateway mobile terminal") fig. 1. However, Thubert et al. does not explicitly disclose having a gateway mobile terminal comprises a cellular telephone. Sreemanthula et al. discloses having in fig. 2 prior art a cellular telephone.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to gateway 12 ("gateway mobile terminal") as taught by Thubert et al. that is a cellular telephone as taught by the applicant Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 12, in combination Thubert et al. Janneteau et al. and Sreemanthula et al. teaches the method in claim 1. *where said gateway mobile terminal comprises a wireless device.* Thubert et al. discloses having a gateway 12 ("gateway mobile terminal") fig. 1. However, Thubert et al. does not explicitly disclose having a gateway mobile terminal comprises a cellular telephone. Sreemanthula et al. discloses having in fig. 2 prior art a cellular telephone.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to gateway 12 ("gateway mobile terminal") as taught by Thubert et al. that is a cellular telephone as taught by the applicant Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 13, in combination Thubert et al. Janneteau et al.
and Sreemanthula et al. teaches the method in claim 1. *where said gateway
mobile terminal comprises a cellular telephone.* Thubert et al. discloses having a
gateway 12 ("gateway mobile terminal") fig. 1. However, Thubert et al. does not
explicitly disclose having a gateway mobile terminal comprises a cellular
telephone. Sreemanthula et al. discloses having in fig. 2 prior art a cellular
telephone.

Therefore it would have been obvious to one having ordinary skill in the art
at the time of the invention was made to gateway 12 ("gateway mobile terminal")
as taught by Thubert et al. that is a cellular telephone as taught by the applicant
Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 14, in combination Thubert et al. Janneteau et al.
and Sreemanthula et al. teaches the method in claim 1.*where said gateway
mobile terminal comprises a mobile router (MR).* Thubert et al. discloses having a
gateway 12 ("gateway mobile terminal") in fig.1   However, Thubert et al. does
not explicitly discloses that the gateway mobile terminal comprises a mobile
router (MR). The applicant Sreemanthula et al. discloses having in fig. 2 prior art
a MR (mobile router) as a gateway terminal.

Therefore it would have been obvious to one having ordinary skill in the art
at the time of the invention was made to gateway 12 ("gateway mobile terminal")
as taught by Thubert et al. that is a mobile router (MR) as taught by the applicant

Sreemanthula et al. to provide mobile device that is able to change location
without losing connectivity and without changing its IP address.

With regard to claim 28, in combination Thubert et al. Janneteau et al.
and Sreemanthula et al. teaches the system recited in claim 16. *where said
gateway mobile terminal comprises a cellular telephone.* Thubert et al. discloses
having a gateway 12 ("gateway mobile terminal") fig. 1. However, Thubert et al.
does not explicitly disclose having a gateway mobile terminal comprises a
cellular telephone. Sreemanthula et al. discloses having in fig. 2 prior art a
cellular telephone.

Therefore it would have been obvious to one having ordinary skill in the art
at the time of the invention was made to gateway 12 ("gateway mobile terminal")
as taught by Thubert et al. that is a cellular telephone as taught by the applicant
Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 29, in combination Thubert et al. Janneteau et al.
and Sreemanthula et al. teaches the system recited in claim 16. *where said
gateway mobile terminal comprises a mobile router (MR).* Thubert et al. discloses
having a gateway 12 ("gateway mobile terminal") in fig.1 However, Thubert et
al. does not explicitly discloses that the gateway mobile terminal comprises a
mobile router (MR). The applicant Sreemanthula et al. discloses having in fig. 2
prior art a MR (mobile router) as a gateway terminal.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 ("gateway mobile terminal")

as taught by Thubert et al. that is a mobile router (MR) as taught by the applicant

Sreemanthula et al. to provide mobile device that is able to change location

without losing connectivity and without changing its IP address.

With regard to claim 40, in combination Thubert et al. and *Janneteau et*

*al. and Sreemanthula et al.*teaches the mobile station recited in claim 31.*where*

said mobile station comprises a wireless device having cellular capability.

Thubert et al. discloses having a gateway 12 ("gateway mobile terminal") fig. 1.

However, Thubert et al. does not explicitly disclose having a gateway mobile

terminal comprises a cellular telephone. Sreemanthula et al. discloses having in

fig. 2 prior art a cellular telephone.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 ("gateway mobile terminal")

as taught by Thubert et al. that is a cellular telephone as taught by the applicant

Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 41, in combination Thubert et al. Janneteau et al.

and Sreemanthula et al. teaches the mobile station recited in claim 31. *where*

said mobile station comprises a cellular telephone. Thubert et al. discloses

having a gateway 12 ("gateway mobile terminal") fig. 1. However, Thubert et al.

does not explicitly disclose having a gateway mobile terminal comprises a

cellular telephone. Sreemanthula et al. discloses having in fig. 2 prior art a

cellular telephone.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 ("gateway mobile terminal")

as taught by Thubert et al. that is a cellular telephone as taught by the applicant

Sreemanthula et al. to provide mobile device with wireless capability.

With regard to claim 42, in combination Thubert et al. Janneteau et al.

and Sreemanthula et al.teaches the mobile station recited in claim 31.*where said*

mobile station data processor further operates to perform a mobile router (MR)

function. Thubert et al. discloses having a gateway 12 ("gateway mobile

terminal") in fig.1   However, Thubert et al. does not explicitly discloses that the

gateway mobile terminal comprises a mobile router (MR).   The applicant

Sreemanthula et al. discloses having in fig. 2 prior art a MR (mobile router) as a

gateway terminal.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 ("gateway mobile terminal")

as taught by Thubert et al. that is a mobile router (MR) as taught by the applicant

Sreemanthula et al. to provide mobile device that is able to change location

without losing connectivity and without changing its IP address.

With regard to claim 15, in combination Thubert et al., Janneteau et al.

and Sreemanthula et al. teaches the method in claim 1. *where said link address*

manager is associated with said AN. Thubert et al. discloses having a access

router 26 ("link address manger"). It is inferred that the access router have a list

of mobile nodes addresses in order to grant access to the network.

With regard to claim 30, in combination Thubert et al., Janneteau et al.

and Sreemanthula et al. teaches the system recited in claim 16. *where said LLA*

manager is associated with said AN. Thubert et al. discloses having a access

router 26 ("link address manger"). It is inferred that the access router have a list

of mobile nodes addresses in order to grant access to the network.

With regard to claim 31, Thubert et al. discloses having a *mobile station*

comprising a stored program and a data processor that executes the stored

program for being operable in a data communications network to function as a

gateway mobile terminal for being coupled between at least one Mobile Network

Node (MNN) and an access point (AP) of an access network (AN) that comprises

an Access Router (AR), Thubert et al. discloses having a gateway 12 (gateway

mobile terminal) of a MANET 10 (mobile ad hoc network) connected to the

Internet ("access network") that includes access router 26 in fig. 1. However

Thubert et al. does not discloses having an access point access point (AP) of an

access network (AN) . The applicant Sreeemanthula et al. discloses in prior art in

fig 1. having a access points 6A and 6B in an access network.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have the Internet ("access network") as

taught by Thubert et al. with a access points 6A and 6B as taught by

Sreeemanthula et al. to provide a point of entry to the access network.

Thibert et al. does not explicitly disclose having a *said data communications*

network comprising a link layer address (LLA) manager for managing LLAs, and

where said mobile station data processor is responsive to the mobile station

connecting to the AP to request information from the LLA manager that relates to

a plurality of LLAs and to allocate individual ones of the plurality of LLAs to

individual ones of the MNNs. Janneteau et al. discloses having a care-of route

solicitation message 2400 in fig 24 soliciting for the all the nodes address("link

layer addresses") from the CN ('link address manger" column 15 paragraph 82

line 1-58).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to gateway 12 as taught by Thubert et al.

sending out a care-of route solicitation message all the nodes address ("link layer

addresses") from the CN as taught by Janneteau et al. to provide a mechanism

that will allow mobile nodes to communicate with other nodes after changing its

link-layer point of attachment from one IP subnet to another.

With regard to claim 32, in combination Thubert et al. Janneteau et al.

and Sreemanthula et al. teaches the mobile station recited in claim 31. *where*

said mobile station data processor is operable to perform a neighbor discovery

procedure with the AR to send at least one neighbor adverisement to declare an

LLA allocated to the at least one MNN. Thubert et al. discloses a mobile node

may communicate with other nodes (stationary or mobile) after moving to new

link (column 1 paragraph 8 line 14-18). However, Thubert et al. does not disclose

each network node sends a neighbor advertisement to the AR to declare the link

address allocated to the network node. Janneteau et al. discloses having MNNs

("mobile network node, "network node") sending one or more extended Binding

Update messages to their respective CNs("access router") ...the care-of-route is

an ordered list of IP addresses that a CN will use to source route its packets to

the MNN on the shortest path ("AR", column 12 line 8-16).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have a mobile node as taught by

Thubert et al. sending a Binding Update messages to their respective CNs with

care-of-route which is an ordered list of IP addresses as taught by Janneteau et

al. to provide a mechanism that will know the true location of the mobile node.

With regard to claim 11, in combination Thubert et al., Janneteau et al.

and Sreeemanthula et al. teaches the method in claim 4. *where the set of LLAs*

are tracked as a group. Thubert et al. discloses having an arrangement in a

gateway for registering mobile routers.of an ad hoc network to respective home

agents (title). However, Thubert et al. does not disclose having a set of LLAs are

tracked as a group. Janneteau et al. discloses having a mobile router

adverstising its mobility in the mobile network ...the mobile router sends a care-

of-route advertisement message...the message contains the care-of-address

(LLAs) of the MR1 (mobile router) and as well as the care-of-addresses of all the

mobile routers above MR1(mobile router). It is inferred that the care-of-

addresses (LLAs) is able to be tracked as a group.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. sending out a

care-of-route advertisement message with care-of-addresses of all the mobile

routers above MR1(mobile router) as taught by Janneteau et al. to providing a

mechanism that will seamlessly handover accessing a access network.

With regard to claim 26, in combination Thubert et al. and teaches the

system recited in claim 19. *where the set of LLAs are tracked as a group.*

Thubert et al. discloses having an arrangement in a gateway for registering

mobile routers of an ad hoc network to respective home agents (title). However,

Thubert et al. does not disclose having a set of LLAs are tracked as a group.

Janneteau et al. discloses having a mobile router adverstising its mobility in the

mobile network ...the mobile router sends a care-of-route advertisement

message...the message contains the care-of-address (LLAs) of the MR1 (mobile

router) and as well as the care-of-addresses of all the mobile routers above MR1(

mobile router). It is inferred that the care-of-addresses (LLAs) is able to be

tracked as a group.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. sending out a

care-of-route advertisement message with care-of-addresses of all the mobile

routers above MR1(mobile router) as taught by Janneteau et al. to providing a

mechanism that will seamlessly handover accessing a access network.

With regard to claim 39, in combination Thubert et al. and teaches the

mobile station recited in claim 31. *where a set of LLAs are tracked as a group.*

Thubert et al. discloses having an arrangement in a gateway for registering

mobile routers of an ad hoc network to respective home agents (title). However,

Thubert et al. does not disclose having a set of LLAs are tracked as a group.

Janneteau et al. discloses having a mobile router adverstising its mobility in the

mobile network ...the mobile router sends a care-of-route advertisement

message...the message contains the care-of-address (LLAs) of the MR1 (mobile

router) and as well as the care-of-addresses of all the mobile routers above MR1(

mobile router). It is inferred that the care-of-addresses (LLAs) is able to be

tracked as a group.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. sending out a

care-of-route advertisement message with care-of-addresses of all the mobile

routers above MR1(mobile router) as taught by Janneteau et al. to providing a

mechanism that will seamlessly handover accessing a access network.

7.   **Claims 5, 20, and 33** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Thubert et al. (PG PUB 2004/0057440) and Janneteau et al.

(EP 1376973 A1) and Sreemanthula et al.(PG PUB 2004/0169220).as applied to

claim 1, 16, and 31 above, and further in view of Lee et al. ("Route Optimization

for Mobile Nodes in Mobile Network based on Prefix Delegation").

          With regard to claim 5, in combination Thubert et al., Janneteau et al.

and Sreemanthula et al. teaches the method in claim 1. *where the request is*

made to obtain a group identification (Group_ID), and further using the Group_ID

to formulate a set of link layer addresses (LLAs) that are allocated to individual

ones of the network nodes. Thubert et al. does not disclose having an

arrangement in a gateway 12 for registering mobile router of a mobile ad hoc

network to respective home agents (title). However, Thubert et al. does not

disclose *request is made to obtain a* group identification (Group_ID), and further

using the Group_ID to formulate a set of link layer addresses (LLAs) that are

allocated to individual ones of the network nodes. Lee et al. discloses route

optimization for mobile nodes in mobile network based on prefix delegation (title).

Lee et al. further discloses MR (mobile router) having a mobile network prefix

("Group_ID) and that the MR performs prefix delegation... also in fig. 2 ech of the

VMN makes CoAs (link layer address) from the prefixes (column 4 line 5-18).

          Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have gateway 12 as taught by Thubert

et al. requesting a mobile network prefix ("Group_ID) and that the MR performs

prefix delegation using an a CoAs (care of address, "link layer address") as

taught by Lee et al. to provide a unique identifier for the IP subnet that the device

came from.

With regard to claim 20, in combination Thubert et al. Janneteau et al.

and Sreemanthula et al. teaches the system recited in claim 16. where the

information relating to a plurality of LLAs comprises a group identification

(Group_ID), and where said gateway mobile terminal uses the Group_ID to

formulate a set of LLAs individual ones of which are allocated to an individual

one of the MNNs. Thubert et al. does not disclose having an arrangement in a

gateway 12 for registering mobile router of a mobile ad hoc network to respective

home agents (title). However, Thubert et al. does not disclose *request is made to*

obtain a group identification (Group_ID), and further using the Group_ID to

formulate a set of link layer addresses (LLAs) that are allocated to individual

ones of the network nodes. Lee et al. discloses route optimization for mobile

nodes in mobile network based on prefix delegation (title). Lee et al. further

discloses MR (mobile router) having a mobile network prefix ("Group_ID) and

that the MR performs prefix delegation... also in fig. 2 ech of the VMN makes

CoAs (link layer address) from the prefixes (column 4 line 5-18).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have gateway 12 as taught by Thubert

et al. requesting a mobile network prefix ("Group_ID) and that the MR performs

prefix delegation using an a CoAs (care of address, "link layer address") as

taught by Lee et al. to provide a unique identifier for the IP subnet that the device

came from.

With regard to claim 33 in combination Thubert et al. ,Janneteau et al.

and Sreemanthula et al.teaches the mobile station recited in claim 31. *where the*

information relating to a plurality of LLAs comprises a group identification

(Group_ID), and where said mobile station data processor is operable to use the

Group_ID to formulate a set of LLAs, individual ones of which are allocated to an

individual one of the MNNs. Thubert et al. does not disclose having an

arrangement in a gateway 12 for registering mobile router of a mobile ad hoc

network to respective home agents (title). However, Thubert et al. does not

disclose *request is made to obtain a* group identification (Group_ID), and further

using the Group_ID to formulate a set of link layer addresses (LLAs) that are

allocated to individual ones of the network nodes. Lee et al. discloses route

optimization for mobile nodes in mobile network based on prefix delegation (title).

Lee et al. further discloses MR (mobile router) having a mobile network prefix

("Group_ID) and that the MR performs prefix delegation...also in fig. 2 ech of the

VMN makes CoAs (link layer address) from the prefixes (column 4 line 5-18).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have gateway 12 as taught by Thubert

et al. requesting a mobile network prefix ("Group_ID) and that the MR performs

prefix delegation using an a CoAs (care of address, "link layer address") as

taught by Lee et al. to provide a unique identifier for the IP subnet that the device

came from.

8.   **Claims 6, 7, 21,22,34, and 35** are rejected under 35 U.S.C. 103(a) as

being unpatentable over Thubert et al. (PG PUB 2004/0057440) and Janneteau

et al. (EP 1376973 A1) and Sreemanthula et al. (PG PUB 2004/0169220) as

applied to claim 1, 16, and 31 above, and further in view of Perkins et al. "Mobility

Support in Ipv6").

With regard to claim 6, in combination Thubert et al., Janneteau et al.

and Sreemanthula et al. teaches the method in claim 1. *where the request is*

made to obtain a set of link layer addresses (LLAs), and further mapping

individual ones of the LLAs to individual hardwired addresses of individual ones

of the network nodes. Thubert et al. disclose having a gateway 12 which is

configured for providing connectivity with a wide area network 14 (page 2

paragraph 21 line 2-3)... the gateway 12 registers the mobile routers 16 with the

appropriate home agents 18 according to the mobile IP v6 protocol 20 (page 2

paragraph 22 1-6). However, Thubert et al. does not disclose request is made to

obtain a set of link layer addresses (LLAs), and further mapping individual ones

of the LLAs to individual hardwired addresses of individual ones of the network

nodes. Perkins et al. discloses having a nodes discover each other's presence,

as well as each other's link-layer(i.e. MAC) addresses by participating in the

neighborhood discovery protocol (column 4 line 16-22). It is inferred that the link

layer addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a gateway 12 as taught by Thubert et al. using a neighborhood discovery protocol locate nodes link layer address as taught by Perkins et al. to provide a mechanism that will reduce delay in delivering packets in the local network.

With regard to claim 7 in combination Thubert et al., Janneteau et al. and Sreemanthula et al et al. teaches the method in claim 1.*where the request is made to obtain a set of link layer addresses (LLAs), and further mapping individual ones of the LLAs to individual media access control (MAC) addresses of individual ones of the network nodes.* Thubert et al. disclose having a gateway 12 which is configured for providing connectivity with a wide area network 14 (page 2 paragraph 21 line 2-3)...the gateway 12 registers the mobile routers 16 with the appropriate home agents 18 according to the mobile IP v6 protocol 20 (page 2 paragraph 22 1-6). However, Thubert et al. does not disclose request is made to obtain a set of link layer addresses (LLAs), and further mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes. Perkins et al. discloses having a nodes discover each other's presence, as well as each other's link-layer(i.e. MAC) addresses by participating in the neighborhood discovery protocol (column 4 line 16-22). It is

inferred that the link layer addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a gateway 12 as taught by Thubert et al. using a neighborhood discovery protocol locate nodes link layer address as taught by Perkins et al. to provide a mechanism that will reduce delay in delivering packets in the local network.

With regard to claim 21, in combination Thubert et al. and Janneteau et al. and Sreemanthula et al et al. t teaches the system recited in claim 16. *where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are mapped to a hardwired address of individual ones of the MNNs.* Thubert et al. dislocs having a gateway 12 which is configured for providing connectivity with a wide area network 14 (page 2 paragraph 21 line 2-3)...the gateway 12 registers the mobile routers 16 with the appropriate home agents 18 according to the mobile IP v6 protocol 20 (page 2 paragraph 22 1-6). However, Thubert et al. does not disclose request is made to obtain a set of link layer addresses (LLAs), and further mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes. Perkins et al. discloses having a nodes discover each other's presence, as well as each other's link-layer(i.e. MAC) addresses by participating in the neighborhood discovery protocol (column 4 line 16-22). It is inferred that the link layer addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a gateway 12 as taught by Thubert et al. using a neighborhood discovery protocol locate nodes link layer address as taught by Perkins et al. to provide a mechanism that will reduce delay in delivering packets in the local network.

With regard to claim 22, in combination Thubert et al., Janneteau et al. and Sreemanthula et al et al. t teaches the system recited in claim 16. *where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are mapped to a media access control (MAC) address of individual ones of the MNNs.* Thubert et al. disclose having a gateway 12 which is configured for providing connectivity with a wide area network 14 (page 2 paragraph 21 line 2-3)...the gateway 12 registers the mobile routers 16 with the appropriate home agents 18 according to the mobile IP v6 protocol 20 (page 2 paragraph 22 1-6). However, Thubert et al. does not disclose request is made to obtain a set of link layer addresses (LLAs), and further mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes. Perkins et al. discloses having a nodes discover each other's presence, as well as each other's link-layer(i.e. MAC) addresses by participating in the neighborhood discovery protocol (column 4 line 16-22). It is inferred that the link layer addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a gateway 12 as taught by Thubert

et al. using a neighborhood discovery protocol locate nodes link layer address as

taught by Perkins et al. to provide a mechanism that will reduce delay in

delivering packets in the local network.

With regard to claim 34, in combination Thubert et al., Janneteau et al.

and Sreemanthula et al et al. teaches the mobile station recited in claim 31.

where the information relating to a plurality of LLAs comprises a set of LLAs

individual ones of which are mapped to a hardwired address of individual ones of

the MNNs. Thubert et al. disclose having a gateway 12 which is configured for

providing connectivity with a wide area network 14 (page 2 paragraph 21 line 2-

3)...the gateway 12 registers the mobile routers 16 with the appropriate home

agents 18 according to the mobile IP v6 protocol 20 (page 2 paragraph 22 1-6).

However, Thubert et al. does not disclose request is made to obtain a set of link

layer addresses (LLAs), and further mapping individual ones of the LLAs to

individual hardwired addresses of individual ones of the network nodes. Perkins

et al. discloses having a nodes discover each other's presence, as well as each

other's link-layer(i.e. MAC) addresses by participating in the neighborhood

discovery protocol (column 4 line 16-22). It is inferred that the link layer

addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have a gateway 12 as taught by Thubert

et al. using a neighborhood discovery protocol locate nodes link layer address as

taught by Perkins et al. to provide a mechanism that will reduce delay in delivering packets in the local network.

With regard to claim 35, in combination Thubert et al. Janneteau et al. and Sreemanthula et al et al. t teaches the mobile station recited in claim 31. *where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are mapped to a media access control (MAC) address of individual ones of the MNNs.* Thubert et al. disclose having a gateway 12 which is configured for providing connectivity with a wide area network 14 (page 2 paragraph 21 line 2-3)... the gateway 12 registers the mobile routers 16 with the appropriate home agents 18 according to the mobile IP v6 protocol 20 (page 2 paragraph 22 1-6). However, Thubert et al. does not disclose request is made to obtain a set of link layer addresses (LLAs), and further mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes. Perkins et al. discloses having a nodes discover each other's presence, as well as each other's link-layer(i.e. MAC) addresses by participating in the neighborhood discovery protocol (column 4 line 16-22). It is inferred that the link layer addresses corresponds to the MAC addresses of the nodes in the local network.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a gateway 12 as taught by Thubert et al. using a neighborhood discovery protocol locate nodes link layer address as

taught by Perkins et al. to provide a mechanism that will reduce delay in delivering packets in the local network.

9.   **Claims 8,23 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Thubert et al. (PG PUB 2004/0057440), Janneteau et al. (EP 1376973 A1) , and Sreemanthula et al. (PG PUB 2005/0169220) as applied to claim 1,4, above, and further in view of Chiou et al. (US Patent 6,473,413).

        With regard to claim 8 in combination Thubert et al., Janneteau et al. and Sreeemanthula et al. teaches the method in claim 4.*where the set of LLAs are associated with a first AP, and further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the set of LLAs with the second AP.* Thubert et al. discloses having a mobile router 16 registered with the appropriate home agents 18 (page 2 paragraph 21 line 16-17). However, Thubert et al. does not disclose where the set of LLAs are associated with a first AP, and further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the set of LLAs with the second AP. Chiou et al. discloses having a method for inter-IP-domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new

access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a

reassociation procedure between the AP 17 and mobile station 19.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 reassociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 23, in combination Thubert et al. ,Janneteau et al.

and Sreemanthula et al. teaches the system recited in claim 19.*where the set of*

LLAs are associated with a first AP,

and where said gateway mobile terminal data processor further operates, in

response to changing a connection of the Gateway mobile terminal from the first

AP to a second AP, to send a message to reassociate the set of LLAs with the

second AP. Thubert et al. discloses having a mobile router 16 registered with the

appropriate home agents 18 (page 2 paragraph 21 line 16-17). However,

Thubert et al. does not disclose where the set of LLAs are associated with a first

AP, and further comprising, in response to changing a connection of the gateway

mobile terminal from the first AP to a second AP, sending a message from the

gateway mobile terminal to reassociate the set of LLAs with the second AP.

Chiou et al. discloses having a method for inter-IP-domain roaming across

wireless networks (title). Chiou et al. further discloses having a MAC address

(LLA) associated with an AP (access point). Chiou et al. discloses that a mobile

station 19 moves from first access point A 13 to the new access point B 17

(column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure

between the AP 17 and mobile station 19.

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 reassociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 36 in combination Thubert et al. and Janneteau et

al. teaches the mobile station recited in claim 31. *where the request is made to*

obtain a set of LLAs, where the set of LLAs are associated with a first AP, and

where said mobile station data processor further operates, in response to

changing a connection of the mobile station from the first AP to a second AP, to

send a message to reassociate the set of LLAs with the second AP. Thubert et

al. discloses having a mobile router 16 registered with the appropriate home

agents 18 (page 2 paragraph 21 line 16-17). However, Thubert et al. does not

disclose where the set of LLAs are associated with a first AP, and further

comprising, in response to changing a connection of the gateway mobile terminal

from the first AP to a second AP, sending a message from the gateway mobile

terminal to reassociate the set of LLAs with the second AP. Chiou et al. discloses

having a method for inter-IP-domain roaming across wireless networks (title).

Chiou et al. further discloses having a MAC address (LLA) associated with an AP

(access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have method of registering mobile node with a home agent ("access point") as taught by Thubert et al. with a mobile station 19 reassociating APs (access point) as taught by Chiou et al. to provide a mechanism to allow to roam among various APs in different IP subnets.

10.   **Claims 9,10,24,25,37 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Thubert et al. (PG PUB 2004/0057440) Janneteau et al. (EP 1376973 A1) , Sreemanthula et al.(PG PUB 2004/0169220) and Lee et al. ("Route Optimization for Mobile Nodes in Mobile Network based on Prefix Delegation") as applied to claim 1,5,16,20,31,33 above, and further in view of Chiou et al. (US Patent 6,473,413).

With regard to claim 9, in combination Thubert et al., Janneteau et al., Sreemanthula et al., and Lee et al. teaches the method in claim 5.*where the Group_ID is associated with a first AP, and further comprising, in response to changing, a connection of the Gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the Group_ID with the second AP.* Thubert et al. discloses having a mobile router

16 registered with the appropriate home agents 18 (page 2 paragraph 21 line

16-17). However, Thubert et al. does not disclose where the set of LLAs are

associated with a first AP, and further comprising, in response to changing a

connection of the gateway mobile terminal from the first AP to a second AP,

sending a message from the gateway mobile terminal to reassociate the set of

LLAs with the second AP. Chiou et al. discloses having a method for inter-IP-

domain roaming across wireless networks (title). Chiou et al. further discloses

having a MAC address and IP address ("Group_ID") associated with an AP

(access point). Chiou et al. discloses that a mobile station 19 moves from first

access point A 13 to the new access point B 17 (column 3 line 59-67 and column

4 line 1-21) with a reassociation procedure between the AP 17 and mobile station

19. It is inferred that the combination of the AP IP address and MAC address

forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 reassociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 10, in combination Thubert et al., Janneteau et al.,

Sreemanthula et al., and Lee et al. teaches the method in claim 5. *where the*

Group_ID is associated with a first AP, and further comprising, in response to

changing a connection of the gateway mobile terminal from the first AP to a

second AP, sending a message from the gateway mobile terminal to obtain

another Group_ID that is associated with the second AP. Thubert et al. discloses

having a mobile router 16 registered with the appropriate home agents 18 (page

2 paragraph 21 line 16-17). However, Thubert et al. does not disclose where the

set of LLAs are associated with a first AP, and further comprising, in response to

changing a connection of the gateway mobile terminal from the first AP to a

second AP, sending a message from the gateway mobile terminal to associated

the set of LLAs with the second AP. Chiou et al. discloses having a method for

inter-IP-domain roaming across wireless networks (title). Chiou et al. further

discloses having a MAC address and a AP IP address ("Group_ID") associated

with an AP (access point). Chiou et al. discloses that a mobile station 19 moves

from first access point A 13 to the new access point B 17 (column 3 line 59-67

and column 4 line 1-21) with an association procedure between the AP 17 and

mobile station 19. It is inferred that the combination of the AP IP address and

MAC address forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 asscociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 24, in combination Thubert et al., Janneteau et al.,

Sreemanthula et al., and Lee et al. teaches the system recited in claim 20.

where the Group_ID is associated with a first AP, and where said gateway mobile terminal data processor further operates, in response to changing a connection of the Gateway mobile terminal from the first AP to a second AP, to send a message to reassociate the Group_ID with the second AP. Thubert et al. discloses having a mobile router 16 registered with the appropriate home agents 18 (page 2 paragraph 21 line 16-17). However, Thubert et al. does not disclose where the set of LLAs are associated with a first AP, and further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the set of LLAs with the second AP. Chiou et al. discloses having a method for inter-IP-domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address and IP address ("Group_ID") associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19. It is inferred that the combination of the AP IP address and MAC address forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have method of registering mobile node with a home agent ("access point") as taught by Thubert et al. with a mobile station 19 reassociating APs (access point) as taught by Chiou et al. to provide a mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 25, in combination Thubert et al., Janneteau et al.,
Sreemanthula et al., and Lee et al. teaches the system recited in claim 20. *where
the Group_ID is associated with a first AP, and where said gateway mobile
terminal data processor further operates, in response to changing a connection
of the Gateway mobile terminal from the first AP to a second AP, to send a
message to obtain another Group_ID that is associated with the second AP.*
Thubert et al. discloses having a mobile router 16 registered with the appropriate
home agents 18 (page 2 paragraph 21 line 16-17). However, Thubert et al. does
not disclose where the set of LLAs are associated with a first AP, and further
comprising, in response to changing a connection of the gateway mobile terminal
from the first AP to a second AP, sending a message from the gateway mobile
terminal to associated the set of LLAs with the second AP. Chiou et al. discloses
having a method for inter-IP-domain roaming across wireless networks (title).
Chiou et al. further discloses having a MAC address and a AP IP address (
"Group_ID") associated with an AP (access point). Chiou et al. discloses that a
mobile station 19 moves from first access point A 13 to the new access point B
17 (column 3 line 59-67 and column 4 line 1-21) with an association procedure
between the AP 17 and mobile station 19. It is inferred that the combination of
the AP IP address and MAC address forms a Group_ID that is unique among
other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art
at the time of the invention was made to have method of registering mobile node
with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 asscociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 37, in combination Thubert et al., Janneteau et al.,

Sreemanthula et al., and Lee et al. teaches the mobile station recited in claim 33.

where the Group_ID is associated with a first AP, and where said mobile station

data processor further operates, in response to changing a connection of the

mobile station from the first AP to a second AP, to send a message to

reassociate the Group_ID with the second AP. Thubert et al. discloses having a

mobile router 16 registered with the appropriate home agents 18 (page 2

paragraph 21 line 16-17). However, Thubert et al. does not disclose where the

set of LLAs are associated with a first AP, and further comprising, in response to

changing a connection of the gateway mobile terminal from the first AP to a

second AP, sending a message from the gateway mobile terminal to reassociate

the set of LLAs with the second AP. Chiou et al. discloses having a method for

inter-IP-domain roaming across wireless networks (title). Chiou et al. further

discloses having a MAC address and IP address ("Group_ID") associated with

an AP (access point). Chiou et al. discloses that a mobile station 19 moves from

first access point A 13 to the new access point B 17 (column 3 line 59-67 and

column 4 line 1-21) with a reassociation procedure between the AP 17 and

mobile station 19. It is inferred that the combination of the AP IP address and

MAC address forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have method of registering mobile node with a home agent ("access point") as taught by Thubert et al. with a mobile station 19 reassociating APs (access point) as taught by Chiou et al. to provide a mechanism to allow to roam among various A Ps in different IP subnets.

With regard to claim 38, in combination Thubert et al., Janneteau et al., Sreemanthula et al., and Lee et al. teaches the mobile station recited in claim 33. *where the Group_ID is associated with a first AP, and where said mobile station data processor further operates, in response to changing a connection of the mobile station from the first AP to a second AP, to send a message to obtain another Group_ID that is associated with the second AP.* Thubert et al. discloses having a mobile router 16 registered with the appropriate home agents 18 (page 2 paragraph 21 line 16-17). However, Thubert et al. does not disclose where the set of LLAs are associated with a first AP, and further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to associated the set of LLAs with the second AP. Chiou et al. discloses having a method for inter-IP-domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address and a AP IP address ("Group_ID") associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with an association procedure between the AP 17 and

mobile station 19. It is inferred that the combination of the AP IP address and

MAC address forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to have method of registering mobile node

with a home agent ("access point") as taught by Thubert et al. with a mobile

station 19 asscociating APs (access point) as taught by Chiou et al. to provide a

mechanism to allow to roam among various A Ps in different IP subnets.

Conclusion

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to DeWanda Samuel whose telephone number

is (571) 270-1213. The examiner can normally be reached on Monday-

Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

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9199 (IN USA OR CANADA) or 571-272-1000.

DeWanda Samuel
7/8/2007

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER